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ABSTRACT

In this study, teacher language was described at the beginning and end of a school year. A third-grade teacher's language directed toward the entire class of 20 students as well as toward a group of 5 language-impaired children within that class was examined separately. The teacher's language content, form and usage were analyzed separately from videotaped language arts lessons. Results indicated that the teacher's language had a more syntactically complex form at the end of the school year than at the beginning for both groups of children. Little change was observed in the use of figurative language forms. The teacher directed more idiomatic expressions to the language-impaired children at the end of the school year than at the beginning. In the area of language use, the teacher used more information-giving acts during the samples collected at the end of the school year. The percentage of information-seeking questions and requests decreased at the end of the school year. These results were consistent in instruction directed to the entire class as well as to the students who were identified as language-impaired. (Contains 41 references.) (PB)

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CHANGES IN A THIRD GRADE TEACHER'S LANGUAGE DURING ONE SCHOOL YEAR

A paper presented at the

American Speech-Language-Hearing Association
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Abstract

In this study, teacher language was described and analyzed at the beginning and end of a school year. The purpose of the study was to determine if and how a third grade teacher's language content, form, and use during classroom instruction changed throughout a school year. The teacher's language that was directed toward the entire class and toward a group of language-impaired children was examined separately. Videotaping occurred three times in one week during language arts lessons in September of the school year prior to training in collaborative intervention with a speech-language pathologist. Videotaping was done in April in the same instructional area as previously described after participation in the collaborative training program. The teacher's language content, form, and use were analyzed and the data collected at the beginning and the end of the year was compared.

Results indicated that the teacher's language had a more syntactically complex form at the end of the school year than at the beginning for both groups of children. Little change was observed in the use of figurative language forms. The teacher directed more idiomatic expressions to the language-impaired children at the end of the school year. In the area of language use, the teacher used more

information-giving acts during the samples collected at the end of the school year. The percentage of information-seeking acts (i.e. questions, requests) decreased at the end of the school year. These results were consistent in instruction directed to the entire class as well as to the students who were identified as language-impaired.

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CHAPTER I

Introduction

In the elementary classroom setting, teaching is accomplished through the use of language. Berlin, Blank, and Rose (1980) state that "verbally based teaching is the medium of instruction through which all other learning is to be fostered" (p. 48). Edwards and Westgate (1987) also assert that classroom language is critical in learning, because "as we listen and as we talk, we learn what it is necessary to know, do and say in that . . . setting, and can display the competence necessary to be accepted as a member." (p. 12).

One objective of schooling is to enhance cognition, and classroom language plays an important role in meeting that goal (Wallach & Miller, 1988). Children may have difficulty grasping the material that the teacher presents during classroom instruction if they have difficulty understanding the language used by the teacher. Therefore, academic performance can be affected by a mismatch between teacher language and student understanding.

Aspects of the teacher's language content, form, and use may cause difficulty in learning the subject matter (Berlin, Blank, & Rose, 1980; Blue, 1981; Fujiki & Brinton, 1984; Wallach & Miller, 1988; Wood, 1976). For certain children, the use of non-literal language forms, such as idioms, sarcasm, ambiguous statements, metaphors, and

similes during instruction may prevent a child from learning the curriculum material. Researchers have examined figurative language comprehension abilities of children and adolescents (Ackerman, 1982; Billow, 1975; Breen, 1986; Douglas & Peel, 1979; Nippold, Cuyler & Braunbeck-Price, 1988; Nippold & Fey, 1983; Nippold, Leonard, & Kail, 1984; Nippold & Martin, 1989; Nippold & Sullivan, 1987; Westerbeck, 1983; Winner, Rosenstiel, & Gardner, 1976). In general, research has indicated that comprehension abilities increase steadily with the increasing age of children. Lazar, Warr-Leeper, Nicholson, and Johnson (1989) studied the occurrence of non-literal language forms in the language of elementary school teachers.

Syntactically complex statements, such as those containing embedded clauses, may cause difficulty in understanding in the classroom. Several researchers have investigated the comprehension of complex language form by children and adolescents (Creaghead, 1978; Emerson & Gekoski, 1980; Nippold, Schwartz & Undlin, 1992). Through these studies, it was found that children become more proficient at understanding complex statements with increasing age.

A third area that may affect academic performance is that of communicative acts, the purpose of the teacher's utterances. Indirect requests provide one example of a communicative act that may be more difficult for a child to

comprehend (Tough, 1973).

Because teaching and learning are communicative processes, language problems of children may be viewed as teaching and learning problems (Silliman & Wilkinson, 1991). Schools and classrooms need to become systems in which teachers, administrators, parents, and speech-language pathologists (SLPs) work together to encourage and support the language learning of children (Pinnell, 1989). Collaboration among teachers and SLPs may be one method of developing classroom language that facilitates and enhances language learning.

The components of a collaborative philosophy include sharing responsibility for developing, implementing, and evaluating instructional materials, sharing ideas and communication goals, and self-evaluating the collaborative process (Silliman & Wilkinson, 1991). Collaboration incorporates the strengths and expertise of the individuals involved (Prelock, Boothe, Bowman, Bricker, Lukes-Miller, Reed, & Stavale, 1991). Collaboration requires bidirectional communication between the teacher and the SLP, each person obtaining and transmitting information (Gerber, 1987). The teacher is responsible for informing the SLP about day-to-day achievement in the classroom, while the SLP must share information about language development and use as well as how to affect change in language skills. It is important for a teacher to learn about the effects of

speech, language and hearing problems on school performance, and for an SLP to learn about the curriculum and how it is implemented in the classroom (Brush, 1987). Through collaboration, the SLP and teacher work cooperatively to achieve the curriculum goals while simultaneously promoting language learning and enhancing communication skills.

Through collaborative service delivery, a teacher's classroom interaction skills may be enhanced, and lead to more effective teaching (Silliman & Wilkinson, 1991). The teacher and SLP can collaboratively examine the language demands of the classroom and determine what can be done specifically to help a child with language problems meet those demands (Creaghead, 1990). Collaboration may also serve to improve the linguistic interaction of the teacher and student (Fujiki & Brinton, 1984). Silliman and Wilkinson (1991) describe a need for further analysis of teacher discourse to determine if teaching strategies are enabling or interfering with the participation of children who have a language impairment. As teachers become more aware of the communicative strengths and needs of their students, they can implement strategies to facilitate communicative growth (Silliman & Wilkinson, 1991).

Several studies have examined collaborative service delivery (Gerber, 1987; Kaufman, 1992; Prelock et al, 1991; Prelock, Boothe, Bricker, Hamm, Lee, Miller, Reed, & Simonton, 1992; Wilcox, Kouri, & Caswell, 1991). Wilcox et

al (1991) found that preschool children who are served in a collaborative program have greater success with generalization of their language goals into their home environment. In a study by Kaufman (1992), elementary school children were given experiences detecting explanation inadequacy through a collaborative intervention program. The children who received the training later demonstrated successes in the classroom and on standardized tests due to their increased awareness of problem-solving skills. Gerber (1987) developed a collaborative program to serve inner-city children. Teachers participating in the program learned strategies to encourage oral communication in their classrooms. The children in the classroom became more proficient in communicating orally.

In order for a child to succeed academically, he or she must be able to understand his or her teacher's language. There is a need for SLPs to know the language comprehension requirements of classrooms. That information, when paired with knowledge of the communication needs of children who are identified as language-impaired, becomes an invaluable component in planning intervention goals and strategies. Through collaboration, an SLP and teacher can assess the language demands of the classroom and determine facilitating techniques to help the children meet those demands. This study examines the language of a third grade teacher at the beginning and end of a school year to identify the language

comprehension abilities necessary for third grade children.

Purpose of Study

The purpose of this study was to describe the changes in a third grade teacher's language content, form, and use in the classroom from the beginning to the end of a school year. The language directed toward the class as a whole, and directed toward a group of students with language impairments was examined. The teacher participated in a collaborative intervention program with a speech/language pathologist throughout the year. The research questions addressed were as follows:

Research Questions

Research Question #1

a. Is there a difference in a third grade teacher's use of non-literal language, including sarcasm, idiomatic expressions, ambiguous statements, metaphors, and similes, during classroom instruction at the beginning of the year and at the end of the year following inservice training and participation in a collaborative intervention program with a speech-language pathologist?

b. Is there a difference in a third grade teacher's use of non-literal language, including sarcasm, idiomatic expressions, ambiguous statements, metaphors, and similes, directed to students who are identified as language-impaired, during classroom instruction at the beginning of the year and at the end of the year following inservice

training and participation in a collaborative intervention program with a speech-language pathologist?

Research Question #2

a. Is there a difference in the percentages of simple, compound, and complex sentences found in a third grade teacher's language during instruction at the beginning of the year and at the end of the year following inservice training and participation in a collaborative intervention program with a speech-language pathologist?

b. Is there a difference in the percentages of simple, compound, and complex sentences found in a third grade teacher's language directed to students who are identified as language-impaired, during instruction at the beginning of the year and at the end of the year following inservice training and participation in a collaborative intervention program with a speech-language pathologist?

Research Question #3

a. Is there a difference in the communicative acts used by a third grade teacher during classroom instruction at the beginning of the year and at the end of the year following inservice training and participation in a collaborative intervention program with a speech-language pathologist?

b. Is there a difference in the communicative acts

used by a third grade teacher directed to students who are identified as language-impaired, during classroom instruction at the beginning of the year and at the end of the year following inservice training and participation in a collaborative intervention program with a speech-language pathologist?

CHAPTER II

Review of the Literature

Typical Classroom Discourse

Children come to school with a wide variety of experience and knowledge. Classroom discourse or the language of instruction is not necessarily the language children have been exposed to in their homes (Nelson, 1985; Tattershall & Creaghead, 1985; Tough, 1973). The content of classroom language is obviously different, but classroom language also has a distinct form and use. Although all of these language components are interrelated, they warrant some discussion as individual features of the instructional language that occurs in school.

Language Content

The content of classroom discourse differs from that of language used outside of school. The use of non-literal language forms, including sarcasm, idioms, ambiguous statements, metaphors, and similes may contribute to the complexity of the content of classroom language.

Words and sentences that require inferencing or figurative interpretation are more difficult for some children to comprehend than those used literally (Blue, 1981; Wallach & Miller, 1988). It has been suggested that

the use of sarcasm, idioms, and ambiguous statements be avoided when speaking to language-delayed children (Blue, 1981).

The occurrence of multiple meaning expressions in elementary school teachers' language was investigated by Lazar et al (1989). Twenty-one elementary school teachers from Canada participated in the study. Language samples were collected for each teacher during a school day. Similes, metaphors, irony, and idioms were identified in the teachers' language. Idioms were found in 11.5% of all utterances. The occurrence of similes, metaphors, and ironic or sarcastic expressions were minimal.

Wood (1976) defines sarcasm as a message in which spoken information is mismatched with visual or vocal information. Winner (1988) explains sarcasm as a statement spoken to convey the speaker's attitude toward something, which is usually negative. An example of sarcasm is the statement "Take your own sweet time" when the tone of voice suggests otherwise and is accompanied by a frowning face. Winner (1988) outlines steps that a listener must go through to comprehend figurative language, including sarcasm. First, the listener must recognize that the speaker does not mean what he or she says. In the case of sarcasm, this step is often the one the listener fails. The second step is to determine the relationship between what the speaker said and what he or she meant. With sarcasm, the listener must

recognize that the meaning is the opposite of what was said. Winner (1988) asserts that children have difficulty interpreting sarcasm because they have difficulty detecting the falsehood, and understanding that the falsehood is intentional.

Through observation of teachers and clinicians, Blue (1981) found that sarcasm is seldom used when speaking to children with language delay. Sarcasm may not occur because of the teacher's intuitive knowledge of the negative effect sarcasm can have on interactions not only with language-impaired students, but with all children (Blue, 1981).

Idioms are expressions in which the words or groups of words used differ in meaning from their dictionary definitions (Blue, 1981; Haley, 1966), and are peculiar to a group of people or community (Webster, 1983). English idioms vary from region to region in the country, and can be used to express a variety of ideas and thoughts (Haley, 1966). Examples of idiomatic expressions are "I really put my foot in my mouth" or "Don't beat around the bush". Children must understand multiple word meanings and the relationships among words to interpret these two expressions. The use of idiomatic expressions in the classroom can exacerbate problems for children who are having difficulty acquiring standard word meanings.

Children's comprehension of idioms was examined by Ackerman (1982). The subjects in his study were students

from first, third, and fifth grades (mean ages of 6;4 [years;months], 8;7, and 10;8, respectively), and college adults. The participants were orally presented with stories that ended with either an idiomatic expression or an idiomatic expression with one changed word, for example, "threw in the towel" and "handed in the towel." The subjects were asked to retell the story and then answer a yes/no question concerning the meaning of the story. Ackerman (1982) found that the ability to correctly explain the idioms increased with grade level. The first and third grade students in the study responded with more literal explanations of the idioms, while the older children and adults provided a greater percentage of figurative interpretations.

Nippold and Martin (1989) investigated adolescents' ability to interpret idiomatic expressions. The participants in their study were students between the ages of fourteen and seventeen years. Each student was presented with twenty idiomatic expressions in written form. The adolescents were required to write their interpretation of each idiom. Half of the idioms were presented in isolation and the other half were presented in the context of a short paragraph. The results of the study revealed that the idioms given in context were easier for the subjects to interpret than the idioms presented in isolation. Furthermore, the older students performed better on both

tasks. The fourteen-year-old students correctly interpreted 54% of the idioms presented in isolation, compared to the seventeen-year-olds' correct interpretation of 67%. Sixty-five percent of the context-supported idioms were correctly interpreted by the fourteen-year-old students, while 72% were correctly interpreted by the oldest group. These results indicated a steady progression of the development of idiom comprehension of adolescents.

Westerbeck (1983) also investigated children's ability to understand idioms. The children who participated in the study were first through eighth grade students. They were given a task in which they had to mark a picture from a set of three that illustrated an idiomatic expression. The older children demonstrated greater comprehension of the given idioms than the younger children. Students in grade one correctly identified the pictures with 73% accuracy. Third grade students obtained an accuracy score of 98%. These results supported other research that has found an increase in comprehension of idioms with an increase in age (Westerbeck, 1983).

Breen (1986) studied idiom comprehension of normal and learning-disabled students. Children between the ages of six and fifteen participated in the study. Each child was presented with an idiom orally, and then shown three pictures with printed answers below, that illustrated possible meanings of the idioms. The students were required

to choose the picture that best represented the idiomatic expression. The learning-disabled students performed significantly poorer on the idiom test than the normal students. The complexity of the sentences was varied to determine if syntactic complexity contributed to the comprehension of idioms. The results indicated that syntactic complexity had little effect on idiom comprehension.

Ambiguous statements often are misunderstood because the true meaning is disguised (Blue, 1981). If, for example, a teacher says to a child with a language impairment, "That's pretty good, but . . ." the child may be confused by the comment "pretty good" when he is required to do the task again. The teacher has used an ambiguous statement, and the intended meaning is not easily determined. Another example of an ambiguous statement is "We don't put things in our mouths" (Blue, 1981, p. 121). This statement is ambiguous because the intended meaning is not explicitly stated. The surface interpretation is that the speaker and listener both have put something in their mouths, and that action is not appropriate. In all probability, the speaker has not put anything in his or her mouth, but the listener has. The intended meaning of that statement is actually a reprimand directed to the listener to stop putting things in his or her mouth.

Nippold, Cuyler, and Braunbeck-Price (1988)

investigated children's and adolescents' explanations of ambiguous advertisements. The participants in their study were nine, twelve, fifteen, and eighteen year old children and adolescents. Nippold et al (1988) selected eighteen different advertisements from magazines and newspapers and asked the subjects to explain the meanings. Fourteen advertisements had both physical and psychological meanings, and four had only one meaning. All of the advertisements consisted of a picture and a written caption. An example of a test item and presentation method was:

> "Here's an ad for artistic and cultural events. It says 'Serve your country. Support the arts.' (Picture shows four men in business suits attempting to hold up very large paint brush.)" (p. 473).

The acceptable responses were (1) physical support, and (2) financial support. The nine year olds identified both meanings of the advertisements with 9% accuracy, the twelve year olds with 38%, the fifteen year olds with 52%, and the eighteen year olds with 71%. These results indicated a steady improvement in the understanding of ambiguous advertisements with increasing age.

The use of metaphors may also lead to comprehension difficulty in the classroom. In an early study by Billow (1975), comprehension of metaphors by children was examined. Males ranging in ages from five to thirteen years were given a metaphor comprehension task. Sentences containing metaphors were orally presented to the children. The

subjects were required to explain the meanings of the metaphors. Billow's findings revealed that as the age of the subjects increased, their correct interpretation of the metaphors increased as well. The five year old children correctly interpreted 29% of the given metaphors, while the thirteen year old children correctly interpreted 92% of the given metaphors.

Douglas and Peel (1979) looked at children's ability to translate figurative language forms, including metaphors. The material used in their study was obtained from classroom workbooks. Children in the first, third, fifth, and seventh grades participated in the study. They were required to listen to audio-recorded sentences or paragraphs containing metaphors, and provide the meaning of a particular phrase from the recording. The first graders were more likely to give a literal interpretation of the metaphor. By the seventh grade, 97% of the students demonstrated full understanding of the metaphors. These results indicated a gradual development of metaphoric understanding.

In a study by Nippold, Leonard, and Kail (1984), children's understanding of metaphors was examined. The children in the study were 30 seven year olds and 30 nine year olds who had no history of communication difficulties. A set of 36 metaphors were presented to the children orally. For each metaphor, the children were given two possible interpretations. The children were to orally repeat their

chosen answer. An example of a test item was:

> "The bird was a rainbow flying in the sky.
> That means the bird:
> 1. was very colorful
> 2. was making a nest" (p. 204).

Results of the study (Nippold, Leonard, & Kail, 1984) indicated that the nine year olds were able to select the correct interpretation for the metaphors more often than the seven year olds. The younger children correctly answered 83 percent of the given metaphors while the older children correctly answered 91 percent.

A study by Nippold and Sullivan (1987) investigated metaphor comprehension in young children, ages five to seven years old. The purpose of their study was to determine if children younger than seven had the ability to determine non-literal meanings of metaphors. The participants in the study were thirty children in each of three age groups, with mean ages of 5;5 (years;months), 6;5, and 7;5. The children were presented orally with a sentence containing a metaphor and then given three choices to determine the meaning of the sentence. An example of a test item was:

> "The house was a cake with no frosting.
> That means the house:
> 1. didn't have a door
> 2. didn't have any windows
> 3. didn't have any paint" (p. 376).

Out of twelve items, the five year old group had a mean of 5.20 correct, the six year old group had a mean of 6.93 correct, and the seven year old group had a mean of 8.77 correct. These results indicated that between the ages of

five and seven, there was a steady improvement in comprehension of metaphors by normal children, and by the age of seven, the normal children in this study understood metaphors with approximately 73% accuracy.

Winner, Rosenstiel, and Gardner (1976) also studied the development of metaphoric understanding in children. Children between the ages of six and fourteen were given an oral metaphor explanation task. Half of the children gave their own interpretation of the metaphors, while the other half chose an interpretation from a set of four. The choices included magical, metonymic, primitive metaphoric, and genuine metaphoric interpretations. Results of the study revealed a clear developmental trend in the explanation of metaphors. The six year olds in the study correctly interpreted the metaphors with only 6% accuracy. The percentage of correct interpretation increased steadily with age. The fourteen year olds achieved an accuracy score of 79%.

Nippold and Fey (1983) examined metaphor understanding for students with language disorders. Twelve students ranging in age from 9;5 to 11;7 with identified language impairments, and twelve students ranging in age from 9;10 to 11;10 with normal language development, were the participants in this study. The students were asked to explain the meanings of sixteen metaphors presented orally. The language-impaired students obtained a mean raw score of

10.42. The normal students obtained a mean raw score of 14.17. These results indicated that students with language difficulties showed deficiencies in understanding metaphoric sentences. The errors of the students were attributed to literal translations of the metaphors.

Language Form

Teacher language in the classroom differs in the complexity of the syntax used (Berlin, Blank, & Rose, 1980; Fujiki & Brinton, 1984; Nelson, 1985). Syntactically complex statements may be difficult for some children to comprehend. These children may not be able to use rules of grammar to break down and understand complex sentences (Nelson, 1985). For example, if a child has difficulty comprehending verbal information, then statements such as "Since we're going to be away for the holiday, we'll need someone to take care of the animals" will be confusing (Berlin, Blank, & Rose, 1980, p. 50). The child may retain only part of the statement, or tune out all of it. In cases such as this, language form can inhibit learning (Berlin, Blank & Rose, 1980).

Children with or without language delay may have difficulty comprehending complex sentences. Fujiki and Brinton (1984) provided a set of suggestions for teachers to consider when talking with children. Among their

suggestions were simplifying utterances by avoiding syntactically complex statements. Avoiding the use of passives, embedded clauses, and sentences where the subject, verb, and object are separated were offered as suggestions for simplifying syntactic complexity.

Children's comprehension of conjunctions is a process that develops through the later school years (Reed, 1986). Although a child may use the conjunction "because", he or she may not fully understand the meaning of the word.

Emerson and Gekoski (1980) studied the development of comprehension for sentences containing the conjunctions "because" or "if". Children in preschool, first, third, and fifth grade participated in the study. Each child was presented with stories and illustrative pictures. Following the stories, they heard a statement related to the stories, and were asked to point to a picture illustrating the sentence. For example, the following stories were told:

> "This set of pictures tells you a story about Woodstock. Here, Woodstock was in his nest. He starts to jump up and down and play. He falls out.
>
> This is a different story about Woodstock. Woodstock is in his nest. He slips and falls out. He is angry and jumps up and down on the ground" (p. 207).

The statement that was given following the stories was either "Woodstock fell out of his nest because he was

jumping up and down" or "Woodstock was jumping up and down because he fell out of his nest." The children were asked to point to the picture that depicted the statement. The older children performed better than the younger children on this comprehension task. The preschool children obtained an average score of 3.20 out of 6 possible. The fifth graders' average score was 4.90 out of 6 possible. There was a steady improvement in performance with increasing age.

Adolescents' use and understanding of adverbial conjuncts has been examined (Nippold, Schwartz, & Undlin, 1992). Thirty adolescents were divided into age groups with mean ages of 12;9 (years;months), 15;10, 19;2, and 23;8. The subjects performed written and reading tasks that examined their ability to use and understand adverbial conjuncts in short paragraphs. For the written task, the subject was required to read a paragraph and supply an appropriate sentence that followed an adverbial conjunct. An example of this task was: "Last night, David borrowed his father's car without asking permission. Consequently, _____" (p. 110). The reading task consisted of a four sentence paragraph with one adverbial conjunct missing. The subjects had to choose an adverbial conjunct from a set of four to appropriately complete the paragraph. An example of the reading task was:

> "Despite its huge size and enormous appetite, the blue whale can swallow nothing larger than a shrimp. Most of its food consists of

tiny fish and sea animals. The blue whale doesn't have to hunt for its food. _____, it simply swims slowly through the water with its huge mouth open.

A. Nevertheless C. Otherwise
B. However D. Rather"

(p. 117)

The subjects in group one (mean age of 12;9) achieved a mean of 44.7% correct for the written task, and 49.77% correct for the reading task. The subjects in group four (mean age of 23;8) achieved a mean of 84.7% correct for the written task and 93.57% correct for the reading task. These results indicated that the use and understanding of adverbial conjuncts steadily improves throughout adolescence and into early adulthood.

In a study by Creaghead (1978), good and poor readers' ability to comprehend oral and written stories was examined. Specific linguistic factors were analyzed to determine which, if any, may cause comprehension difficulties. Eighty third grade students participated in the study. They were divided into groups of "good" and "poor" readers, with forty children in each group. All children listened to a recorded story which was followed by a reading comprehension test. For the comprehension test, half of the children in each group were given sentences to read and were required to select a picture from a set of four that best fit the sentence they read. The other half of the children in each group listened to the same sentences and were asked to select the correct picture from the same set of pictures.

An analysis of linguistic factors that contributed to the complexity of the task revealed that sentences containing relative clauses were difficult to comprehend for both good and poor readers under both oral and written conditions. Sentences containing relative clauses were more difficult to understand than sentences containing adverbial clauses. The results indicated that third grade children may have difficulty comprehending oral and written language containing relative and/or adverbial clauses (Creaghead, 1978).

Language Use

Language use is another factor that can affect communication in the classroom. In typical classrooms, teachers dominate classroom discussion (Berlin, Blank, & Rose, 1980; Edwards & Furlong, 1978; Lindfors, 1990). A high percentage of known-answer questions (Lindfors, 1990) and indirect requests occur. The observed pattern of teacher-student interaction is: 1) teacher initiates, 2) student responds, and 3) teacher evaluates. Edwards and Furlong (1978) have found that in typical classrooms, the communicative rights of teachers and students are unequal, in that the teacher usually takes his or her speaking turn whenever he or she chooses, and most of the talking is telling.

Sinclair and Coulthard (1975) developed a set of

communicative acts that teachers and students most often use in their classroom discourse. The communication acts were developed as part of a research project investigating the use and organization of language between teachers and students. The researchers began by examining classroom situations in which teachers of 10 to 11 year old students were speaking in front of the class. Through these samples, a system of analysis for communicative acts commonly occurring in the classroom was designed. A larger body of samples was then collected from classrooms varying in grade level, subject, and teaching style to modify the analysis. The system developed by Sinclair and Coulthard can be applied to most teacher-student interaction in the classroom.

Some communicative acts commonly used by teachers included giving informatives and directives, eliciting responses, nominating certain students to respond, and accepting and evaluating the student's reply (Sinclair & Coulthard, 1975). In comparison, the students demonstrated bidding for an answer, replying to a question, and reacting to a direction. From these examples of communicative acts, it can be seen that the speaking rights of the teacher and students were unequal (Sinclair & Coulthard, 1975).

Many of the communicative acts that teachers use are questions. The questions used in the classroom serve a different purpose than questions students are accustomed to

in the home (Tattershall & Creaghead, 1985). At home, questions are usually "information-seeking" while at school they are "test" questions. For example, a parent may ask "What did you do at Bobby's?" while a teacher may ask "Who discovered America?"

Questions are a primary feature of the language used in teaching (Wallach & Miller, 1988). Some of the questions teachers ask may lead to failure for the students who do not have the experience and knowledge necessary for the interpretation of these questions. Indirect requests provide one example. In the question, "Why don't you close the door?" a child must be able to determine that the question is meant as a command (Nelson, 1985).

Language in classrooms needs to be assessed to determine the comprehension demands placed on students. Using a collaborative strategy, teachers and SLPs can examine classroom language requirements and determine ways to encourage language growth and understanding, and achieve greater academic success.

Collaborative Intervention Models

Gerber (1987) outlines a collaborative program designed to enhance the communication skills of children in an inner-city school. The main goals of the program were to "train nonstandard-speaking students to be functionally bidialectal and to foster elaboration of the use of language as a tool

of thought and as an aid to learning and academic performance" (p. 114). Ten teachers in an inner-city school participated in inservices to learn strategies for encouraging oral communication in their classrooms. The inservices covered topics such as speech and language development, phonetics, and linguistics. Activities were demonstrated by the speech-language pathologists once a week, and were followed through by the teachers during the remainder of the week. Some of the activities included sound-awareness tasks, practice with phonological and morphological patterns, expansion of sentences, and other metalinguistic activities using the children as the center of the activity. The communication skills of the children were enhanced not by teaching about language, but by teaching through language. After one semester, the participating teachers were rated by a naive judge, who observed both the experimental and control classrooms. The teachers were rated on the "communicative climate" (p. 116) they established, and the number of techniques they used that were demonstrated in the program. Participant teachers were rated more than twice as high as control teachers for the communicative climate of their classroom. The participating teachers were also observed to use strategies for encouraging oral communication skills five times as often as the non-participating teachers.

Another example of a collaborative intervention model

exists in the Norwood City School District in Norwood, Ohio (Prelock et al, 1991: Prelock et al, 1992). This collaborative program involves teachers, speech-language pathologists, student teachers in speech-language pathology, and administrators within the district. Children who are identified as having speech and language impairments are served in their regular classroom by the collaborative team. The team members develop curriculum-based lesson plans that incorporate the speech and language goals of the targeted children. The program involves inservice training for the participating teachers that focuses on language development and disorders, weekly collaborative planning meetings, and weekly collaborative lessons in the classroom.

A study of a collaboratively designed communication skills unit examined third grade students' understanding of explanation adequacy (Kaufman, 1992). A third-grade teacher, a speech-language pathologist, and a graduate student in speech-language pathology designed and implemented a communication skills unit. The unit consisted of three lessons and several follow-up activities to facilitate understanding of what constitutes good explanations. Two third grade classes participated in the study. One class received the communication skills unit lessons, and the other did not. Each student involved took a pre-test and post-test, where they viewed a videotape of two children helping each other with math problems. They

rated the explanations from the tape and justified their ratings.

Results of the Kaufman study (1992) indicated significant improvement in understanding of explanation adequacy in the group participating in the collaboratively planned and implemented communication skills unit. The teacher noted improvement in the students' question-asking and responding. The teacher also noted that the intervention helped her students with problem-solving on standardized tests.

A study of early language intervention compared individual and classroom treatment (Wilcox, Kouri, & Caswell, 1991). The participants in this study were twenty preschool children. Ten children were seen on an individual basis and ten were seen in their preschool classroom. The goal for each child participating in the study was to develop functional use of ten basic words. Each child had different target words depending on his or her "phonetic repertoires" (p. 51). During each treatment session, both individual or classroom, the child's targeted words were each modeled at least ten times. In the classroom intervention group, models were provided by both an early childhood special educator and a speech-language pathologist.

Progress measures in the Wilcox, Kouri, and Caswell study (1991) were gathered by tallying the number of

spontaneous productions of target words by each child. Generalization measures were acquired by gathering language samples in the children's homes, and the spontaneous productions of target words were noted. There was no difference in the spontaneous use of target words in the treatment sessions for the two groups of children. However, the children receiving treatment in the classroom demonstrated more productive use of their target words in their homes. Wilcox, Kouri, and Caswell recommended treatment in a classroom setting when possible, because generalization of language goals to other settings is a primary concern in language intervention. They also suggested integrating language and instructional goals.

Summary

Language is the medium through which learning occurs in typical classrooms. Children who have difficulty understanding the language used by their teachers may have greater difficulty learning the academic content the teachers are presenting. The areas of language content, form, and use may contribute to a child's confusion.

The content of a teacher's language may lead to difficulty in understanding if non-literal language is used often, including the use of idioms, metaphors, and sarcasm (Blue, 1981; Winner, 1988). If a child does not have the ability to detect ambiguity or inconsistency in language, he

or she will have difficulty correctly interpreting the teacher's comments.

Language form, if complex, may also contribute to comprehension difficulty. Some children with language problems do not have the ability to break down a complex statement for understanding. Embedded clauses, complex conjunctions, and relative clauses all add to the difficulty of an utterance (Creaghead, 1978; Emerson & Gekoski, 1980; Nelson, 1985; Nippold, Schwartz, & Undlin, 1992).

Language use is a third area that may affect understanding in the classroom. In a typical classroom, the teacher dominates classroom discourse, and uses many questions throughout his or her teaching (Lindfors, 1990).

Collaboration between a speech/language pathologist and a teacher may be a method to help meet the communication needs of children in school. Through a collaborative intervention program, a teacher's classroom interaction skills may be enhanced (Silliman and Wilkinson, 1991). The language demands of the classroom and the needs of the children are assessed in collaborative intervention, and strategies are developed that can foster communicative and academic success.

CHAPTER III

Methodology

Subject

The subject of this study was a third grade teacher from the Norwood City School District. She received her Bachelor of Science in Education in 1966, and her Master's of Education in 1982. She had been teaching at the elementary level for 25 years. It was her fourth year teaching third grade. She had also taught second/third grade split, fourth grade, and fourth/fifth grade split. She had not had any previous experience in collaboration with a speech/language pathologist, although she had consulted with the school SLP concerning students in her class.

The city of Norwood has a population of approximately 26,000 residents, half of whom are renters. Most of the renters are first or second generation Appalachian families. Many of the students in the Norwood City School District might be considered disadvantaged or at-risk. Twenty-five percent of the students are from low-income families.

The teacher in this study taught a third grade class of 20 students. Five of the students were identified as having speech and language impairments. The identified students' goals included improving oral and written expressive

language, fluency, and comprehension monitoring.

The Collaborative Program

The collaborative program that the teacher participated in was funded by a U.S. Department of Education grant. It was a three-year program involving the University of Cincinnati, the Norwood City Schools, and the Hamilton County Office of Education. The primary goal of the program was to train second-year graduate students in speech-language pathology in collaborative service delivery of speech and language intervention. Speech-language pathologists from the Hamilton County Board of Education and teachers in the Norwood City Schools were also trained in the collaborative program. The requirements of the program included participation in inservice training sessions, and weekly collaborative meetings and lessons. A speech-language pathologist, a graduate student in speech-language pathology, and a teacher met weekly to collaboratively plan lessons to present to the class, and to discuss concerns that any of the team members had about the students in the class. The lessons were planned using the curriculum goals for the entire class and the speech and language goals for the identified students. The team members took turns leading the lessons and collecting data on the identified students.

As part of the collaborative intervention program, the

teacher, SLP, and graduate student clinician had the ongoing support of a project director through evaluation of and suggestions for planning meetings and language in the classroom activities. The project director met with the graduate student weekly to discuss concerns, and was available to the teacher and SLP for discussion of any problems or concerns that developed.

Training

The teacher involved in this study participated in the following training procedures throughout the school year:

1. attended seven inservice training sessions through the months of September, October, and November;
2. participated in weekly collaborative meetings with the SLP and graduate student clinician; and,
3. carried out weekly language activities with the SLP and graduate student clinician.

The overall objectives of the inservice training sessions were to develop knowledge and skills in:

- understanding normal communication and language development in school age children;
- understanding the communicative aspects of classrooms;
- identifying communication disorders common to classrooms;
- understanding the impact whole language and

traditional classroom methodology have on the communication-impaired child;

- providing a framework for making decisions about how to foster language and communication in the classroom; and,
- recognizing the importance of collaborative efforts in solving communication problems.

The objectives of the weekly collaborative meetings with the SLP and graduate student clinician were to discuss the needs of the identified language-impaired students in the classroom and to develop ways of meeting those needs. The weekly meetings also were used to develop lesson plans which addressed both the curriculum goals for the entire class, and the speech and language goals for the identified children.

The objectives of the weekly language activities with the SLP and graduate student clinician were to teach a curriculum-based lesson while incorporating the speech and language goals of the identified language-impaired students in the classroom. The weekly language activities were also used to model for the teacher appropriate cues for the identified speech and language-impaired students.

Data collection

The teacher's instruction during language arts lessons was video-recorded for three half-hour segments of class

time on three separate days during one week, two times during the school year. Videotaping occurred in the months of September and April. Videotaping was used to ensure complete recording of teacher instruction.

The lessons that were recorded in September followed the language arts curriculum and included the introduction and review of spelling words. The general format of the lessons included teacher introduction or review of spelling words, and an activity based on the words. These lessons took place during the third week of school. The weekly routine of introducing and discussing spelling words was being developed.

The lessons that were recorded in April followed the language arts curriculum and included writing various forms of literature focusing on the topic of whales. The general format of these lessons included the teacher leading discussions about whales, the class brainstorming characteristics about whales or topics to write about, and the students writing letters and Haiku poems about whales.

Analysis of Language Content

The use of non-literal language was examined by tallying the occurrences of sarcasm, idiomatic expressions, ambiguous statements, metaphors, and similes. A sarcastic expression was defined as a sharp and often satirical utterance (Webster, 1983) that conveys the speaker's

attitude toward a situation (Winner, 1988). An example of a sarcstic expression is "I didn't know we had so many Jessicas!" Idiomatic expressions were defined as those utterances that are peculiar to the English language, and have a meaning that can not be derived from the meanings of the individual words (Webster, 1983). An example of an idiom is "Maybe that word threw some of you". An ambiguous statement was defined as one in which the intended message is not explicitly stated, for example, "We will not become better readers by just repeating what I say will we?". Metaphors were defined as a figurative form of language in which a word or phrase is used in the place of another word or phrase to denote a likeness between them (Webster, 1983). An example of a metaphor is "You're becoming good detectives." Similes were defined as a form of figurative language which compare two things using "like" or "as". An example of a simile is "This is like a puzzle."

Analysis of Language Form

The syntax of the teacher's language was analyzed by counting simple, compound, and complex sentences. Simple sentences were defined as having only one subject and verb (Nelson, 1985), for example, "Let's look at this first word." Compound sentences included those with two main clauses joined by and, but, or or (Nelson, 1985). An example would be, "Close your eyes and spell it for me."

A complex sentence included those having one or more embedded clauses, or containing the relative pronouns who, that, or which (Nelson, 1985). Any sentence containing more than one verb that was not connected by and, but, or or was considered to be complex. Examples of complex sentences are "You can do this while you are at home over the holidays" and "He's the one that has gotten himself into trouble."

Analysis of Language Use

Language use was analyzed for the type and occurrence of communicative acts the teacher used. The different communicative acts used by the teacher were analyzed based on Sinclair and Coulthard's (1975) categories. Table 1 provides a listing and examples of these communicative acts.

Table 1 Communicative acts and descriptions

Communicative Act	Description
marker	marks boundaries (well; OK; now)
cue	evokes appropriate bid (Put your hand up.)
nomination	chooses student to contribute to discourse (Yes, Paul.)
metastatement	tells students structure of lesson, where they are going (I'm going to give each of you one of these cards.)
clue	provides additional information (It starts with a "T".)
prompt	reinforces directive or elicitation (go on; hurry up)
informative	provides information - no response expected (There's the wool being cut.)
comment	exemplifies, expands, justifies, or provides additional information (Yes, it means be careful because the road is slippery.)
conclusion	summarizes previous information (So symbols really are extremely useful for us.)
direct elicitation	directly requests linguistic response (What do we call them?)
indirect elicitation	indirectly requests linguistic response (Would you like to answer that question?)
direct directive	requests nonlinguistic response (Write these down now; All eyes on me.)
indirect directive	indirectly requests nonlinguistic response (Why don't you throw that away?)

(Table 1 continued)

Communicative Act	Description
check	real questions - teacher does not know answer (Can everyone see the board?)
rhetorical question	question asked for effect, no response expected (What if things change?)
tag question	declarative sentence followed by an interrogative (That's the one, isn't it?)
accept	indicates that teacher has heard or seen the informative, reply, or react, and it was appropriate (repetition of response)
evaluate	comments on quality of reply, react, or initiation (Very good; I don't think so.)
reply	answers elicitation (Because it's hard.)
react	answers directive (non-verbal action)
loop	returns discourse to stage before student spoke (What did you say?)
aside	instances of teacher talking to self (Let me just put this over here on my desk.)
acknowledge	shows understanding (yes; OK; gestures)

Some communicative acts that have similar functions were examined together. For example, metastatement, clue, informative, comment, and conclusion are communicative acts in which information is given. The frequency of occurrence of these acts was examined separately and in combination as information-giving acts. Elicitations, directives, and

checks are communicative acts in which information is sought. The frequency of occurrence of these acts was examined separately and in combination as information-seeking acts.

Possible responses to a child's reply are to accept and/or evaluate the reply. For example, a response may be accepted without an evaluation which would be a repetition: "Blue whale." A response may be evaluated without repeating it. Finally, a response may include an acceptance and an evaluation as in the example "Blue whale, very good."

Reliability

Reliability data was collected for 25% of the teacher's utterances. A second examiner independently analyzed 25% of the teacher's utterances for each period of data collection. Inter-rater reliability was calculated by comparing the two examiners' analyses of the teacher's language on an utterance-by-utterance basis. The number of times the examiners agreed was divided by the total number of times the examiners agreed or disagreed. This number was multiplied by 100 to achieve a percentage. Inter-rater reliability was 92.29% for analysis of language content, 97.23% for analysis of language form, and 92.67% for analysis of language use.

Intra-rater reliability was determined by comparing two analyses of the teacher's language by the principal

investigator on an utterance-by-utterance basis for 25% of the teacher's utterances. The number of times the two analyses agreed was divided by the total number of times the analyses agreed or disagreed. This number was multiplied by 100 to gain a percentage. Intra-rater reliability was 98.72% for analysis of language content, 91.76% for analysis of language form, and 91.77% for analysis of language use.

CHAPTER IV

Results

In this study, teacher language was examined over the course of a school year. The purpose of the study was to determine if and how a teacher's language content, form, and use in the classroom change from the beginning to the end of third grade after participation in a collaborative intervention program with a speech/language pathologist. The teacher's language was analyzed in the areas of content, form, and use. Two sets of language samples consisting of approximately 2,600 utterances were transcribed from classroom instruction recordings. Language samples were collected in September and April of the same school year.

The number of occurrences of specific non-literal language forms in each set was tallied. The number of occurrences was divided by the total number of utterances in the data set and multiplied by 100 to gain a percentage. The percentages obtained were used to address research questions 1a and 1b.

The number of simple, compound, and complex sentences that the teacher used were tallied for each data set. For each category, the number obtained was divided by the total number of utterances for that data set and multiplied by 100 to gain a percentage. The percentages were used to address

research questions 2a and 2b.

The number of occurrences of specific communicative acts was tallied for each data set. A percentage for each communicative act was obtained by dividing the number of times it occurred by the total number of communicative acts in the data set then multiplying by 100. The percentages found were used to address research questions 3a and 3b.

Research Question 1:

a. Is there a difference in a third grade teacher's use of non-literal language, including sarcasm, idiomatic expressions, ambiguous statements, metaphors, and similes, during classroom instruction at the beginning of the year and at the end of the year following inservice training and participation in a collaborative intervention program with a speech/language pathologist?

b. Is there a difference in a third grade teacher's use of non-literal language, including sarcasm, idiomatic expressions, ambiguous statements, metaphors, and similes, directed to students who are identified as language-impaired, during classroom instruction at the beginning of the year and at the end of the year following inservice training and participation in a collaborative intervention program with a speech-language pathologist?

Table 2 presents the frequency and percent of

occurrence of non-literal language forms directed to the whole class and to the language-impaired students during September and April.

Table 2 Percent and frequency of occurrence of non-literal language forms directed by the teacher to the whole class and the language-impaired students in September and April

	September		April	
Non-literal form	W.C. (1437 total)	L.I. (239 total)	W.C. (1159 total)	L.I. (101 total)
sarcasm	0.21% (3)	0.00% (0)	0.00% (0)	0.00% (0)
idiomatic expressions	10.79% (155)	4.60% (11)	11.73% (136)	10.89% (10)
ambiguous statements	1.46% (21)	1.26% (3)	1.04% (12)	0.00% (0)
metaphors	0.14% (2)	0.00% (0)	0.00% (0)	0.00% (0)
similes	0.14% (2)	0.42% (1)	0.43% (5)	1.98% (2)

W.C. = Whole class
L.I. = Language-impaired students

There were few differences in the frequency of non-literal forms directed to the whole class. Sarcasm (September=0.21%; April=0.00%), ambiguous statements (September=1.46%; April=1.04%), metaphors (September=0.14%; April=0.00%), and similes (September=0.14%; April=0.43%)

occurred infrequently for both beginning and end of the year language samples. Idiomatic expressions were the most frequently occurring non-literal forms (September=10.79%; April=11.73%).

The teacher's language directed to language-impaired students contained few non-literal forms. Sarcasm and metaphors did not occur in the beginning or end of the year, while ambiguous statements (September=1.26%; April=0.00%), and similes (September=0.42%; April=1.98%) occurred infrequently. As was found for instruction directed to the whole class, idiomatic expressions were the most frequently occurring non-literal forms. The use of idiomatic expressions was less frequent in September (4.60%), and more frequent in April (10.89%). The frequency of idiomatic expressions used with the language-impaired children at the end of the year (10.89%) was close to the frequency of idioms directed to the entire class (11.73%).

Research Question 2:

a. Is there a difference in the percentages of simple, compound, and complex sentences found in a third grade teacher's language during instruction at the beginning of the year and at the end of the year following inservice training and participation in a collaborative intervention program with a speech-language pathologist?

b. Is there a difference in the percentages of

simple, compound, and complex sentences found in a third grade teacher's language directed to students who are identified as language-impaired, during instruction at the beginning of the year and at the end of the year following inservice training and participation in collaboration with a speech-language pathologist?

Table 3 shows the frequency and percent of occurrence of simple, compound, and complex sentences directed to the whole class and the language-impaired children during September and April.

Table 3 Percent and frequency of occurrence of simple, compound, and complex sentences directed by the teacher to the whole class and language-impaired students in September and April

	September		April	
Syntax type	W.C. (1437 total)	L.I. (239 total)	W.C. (1159 total)	L.I. (101 total)
Simple	64.58% (927)	73.22% (175)	54.79% (633)	64.36% (65)
Compound	12.25% (176)	14.23% (34)	11.39% (132)	6.93% (7)
Complex	23.17% (334)	12.55% (30)	33.82% (394)	28.71% (29)

W.C. = Whole class
L.I. = Language-impaired children

Simple sentences were used most frequently by the

teacher when directing instruction to the whole class (September=64.58%; April=54.79%) and more specifically to the language-impaired children (September=73.22%; April=64.36%;) during both September and April. The use of compound sentences directed to the class was infrequent, and remained essentially unchanged from September (12.25%) to April (11.39%). In comparison, more compound sentences were directed to the language-impaired students in September (14.23%) than in April (6.93%).

The teacher directed complex sentences more often to the whole class than to the language-impaired students during both September and April. Her use of complex sentences with the class and language-impaired children also increased from September (W.C. = 23.17%; L.I. = 12.55%) to April (W.C. = 33.82%; L.I. = 28.71%).

Research Question 3:

a. Is there a difference in the communicative acts used by a third grade teacher during classroom instruction at the beginning of the year and at the end of the year following inservice training and participation in a collaborative intervention program with a speech-language pathologist?

b. Is there a difference in the communicative acts used by a third grade teacher directed to students who are identified as language-impaired, during classroom

instruction at the beginning of the year and at the end of the year following inservice training and participation in a collaborative intervention program with a speech-language pathologist?

Table 4 presents the frequency and percent of occurrence of each communicative act directed to the class during September and April. Table 5 summarizes the frequency and percent of occurrence for each communicative act directed to the language-impaired students during September and April.

Table 4 Percent and frequency of occurrence of communicative acts directed by the teacher to the whole class in September and April

Communicative Act	September (1549 total)	April (1164 total)
marker	2.75% (43)	1.21% (14)
cue	0.06% (1)	0.86% (10)
nomination	2.62% (42)	1.55% (18)
metastatement	0.58% (9)	0.60% (7)
clue	3.51% (55)	2.66% (31)
prompt	0.89% (14)	0.17% (2)
informative	6.77% (109)	25.43% (296)
comment	10.35% (167)	8.25% (96)
conclusion	1.02% (16)	1.46% (17)
direct-elicitation	29.97% (449)	21.39% (249)
indirect-elicitation	6.26% (97)	4.47% (52)
direct-directive	5.62% (88)	3.09% (36)
indirect-directive	2.68% (42)	2.23% (26)
check	2.81% (45)	1.55% (18)
rhetorical question	0.00% (0)	0.09% (1)

(Table 4 continued)

Communicative Act	September (1549 total)	April (1164 total)
tag question	2.65% (41)	3.35% (39)
accept	14.19% (221)	11.43% (133)
evaluate	5.56% (89)	5.67% (66)
reply	2.94% (12)	3.95% (46)
react	0.00% (0)	0.09% (1)
loop	0.32% (5)	0.43% (5)
aside	0.13% (3)	0.09% (1)
acknowledge	0.06% (1)	0.00% (0)

Table 5 Percent and frequency of occurrence of communicative acts directed by the teacher to the language-impaired students in September and April

Communicative Act	September (271 total)	April (111 total)
marker	0.37% (1)	0.00% (0)
cue	0.00% (0)	1.80% (2)
nomination	7.74% (21)	5.41% (6)
metastatement	0.00% (0)	0.00% (0)
clue	6.27% (17)	1.80% (2)
prompt	0.74% (2)	0.90% (1)
informative	2.21% (6)	18.02% (20)
comment	5.54% (15)	7.21% (8)
conclusion	1.11% (3)	0.00% (0)
direct-elicitation	36.16% (98)	12.61% (14)
indirect-elicitation	6.27% (17)	11.71% (13)
direct-directive	4.80% (13)	1.80% (2)
indirect-directive	1.11% (3)	3.60% (4)
check	2.58% (7)	1.80% (2)
rhetorical question	0.00% (0)	0.00% (0)

(Table 5 continued)

Communicative Act	September (271 total)	April (111 total)
tag question	1.85% (5)	2.70% (3)
accept	12.55% (34)	13.51% (15)
evaluate	9.59% (26)	12.61% (14)
reply	0.74% (2)	2.70% (3)
react	0.00% (0)	0.00% (0)
loop	0.37% (1)	1.80% (2)
aside	0.00% (0)	0.00% (0)
acknowledge	0.00% (0)	0.00% (0)

Markers show boundaries between thoughts as well as between topics. The teacher used markers more frequently during whole class instruction in September (2.75%) than in April (1.21%). The frequency of markers directed to the language-impaired children remained primarily unchanged from September (0.37%) to April (0.00%).

A cue is used to prompt the students to raise their hands to be called on. Cues were less frequent in September (0.06%) than in April (0.86%) for the whole class, as well as for the language-impaired students (September=0.00%;

April=1.80%).

Nominations, or calling on a student to respond, decreased in frequency from September (2.62%) to April (1.55%) for the whole class. Nomination of language-impaired students also occurred more frequently in September (7.74%) than in April (5.41%).

Metastatement, clue, informative, comment, and conclusion were examined separately and in combination. The communicative act of metastatement, which tells the listener what is going to happen next, and conclusion, which summarizes previous information, remained essentially unchanged for whole class instruction in September (metastatement=0.58%; conclusion=1.02%) and April (metastatement=0.60%; conclusion=1.46%). For the language-impaired children, metastatement was not used in September or April. Conclusions decreased in frequency of occurrence from September (1.11%) to April (0.00%).

Clues are those communicative acts in which additional information is provided to make a student's correct response more likely. The frequency of occurrence of clues showed a decrease in April for both whole class and language-impaired children (September: W.C.=3.51%, L.I.=6.27%; April: W.C.=2.66%, L.I.=1.80%).

Informatives are those communicative acts in which new information is given. The listener may be hearing the information for the first time. Informatives occurred more frequently in April for the whole class (25.43%) and language-impaired children (18.02%) than in September

(W.C.=6.77%; L.I.=2.21%).

Comment is a communicative act which is a statement that expands or exemplifies an informative. Comments decreased in frequency of occurrence for the whole class from September (10.35%) to April (8.25%); however, for the language-impaired children, comments occurred more frequently in April (7.21%) than in September (5.54%).

Prompts are communicative acts which encourage students to respond to a question or direction. The frequency of occurrence of prompts remained essentially unchanged in September (W.C.=0.89%; L.I.=0.74%) and April (W.C.=0.17%; L.I.=0.90%) for both groups of children.

Elicitations are those communicative acts in which the speaker is requesting a linguistic response from the listener. A direct-elicitation is a request which explicitly states the desired response. An indirect-elicitation, however, is a request in which the surface question is not congruent with the actual desired response. Direct-elicitations occurred more frequently in September for both the whole class (29.97%) and language-impaired children (36.16%) than in April (W.C.=21.39; L.I.=12.61%). For the whole class, indirect elicitations also occurred more frequently in September (6.26%) than in April (4.47%). However, for the language-impaired group, the use of indirect-elicitations was more frequent in April (11.71%) than in September (6.27%).

Directives are requests for a non-linguistic response or action from the listener. Directives may also be direct

or indirect, depending on if the desired response is explicitly stated. For the whole class and language-impaired students, direct-directives occurred more frequently in September (W.C.=5.62%; L.I.=4.80%) than in April (W.C.=3.09%; L.I.=1.80%). The frequency of occurrence of indirect-directives for the whole class remained essentially unchanged from September (2.68%) to April (2.23%). For the language-impaired children, however, the frequency of occurrence of indirect-directives increased from September (1.11%) to April (3.60%).

Checks are the communicative acts that serve as "real" questions, those to which the teacher does not know the answer. The frequency of occurrence of checks decreased for both groups of children from September (W.C.= 2.8%; L.I.=2.58%) to April (W.C.=1.55%; L.I.=1.80%).

Rhetorical questions are those questions that do not require a response from the listener. The teacher in this study used rhetorical questions infrequently with the whole class (September=0.00%; April=0.09%) and not at all with the language-impaired children.

Tag questions are statements followed by an interrogative. The frequency of occurrence of tag questions remained essentially unchanged in the September and April samples for both the whole class (September=2.65%; April=3.35%) and language-impaired children (September=1.85%; April=2.70%).

The communicative act accept is found after a listener responds to an elicitation. It is a repetition of the

response without a comment on quality. For the whole class, the teacher used acceptance more frequently in September (14.19%) than in April (11.43%). For the language-impaired children, the frequency of occurrence remained essentially unchanged (September=12.55%; April=13.51%).

Evaluate is a communicative act that comments on the quality of the given response to an elicitation. The frequency of occurrence of evaluations was unchanged for the whole class in September (5.56%) and April (5.67%). For the language-impaired children, however, the teacher used evaluations more frequently in April (12.61%) than she did in September (9.59%).

A reply is a response to an elicitation, while a react is a response to a directive. These communicative acts remained unchanged for the whole class in September (reply=2.94%; react=0.00%) and in April (reply=3.95%; react=0.09%). For the language-impaired children, the teacher used no reacts in September or April. She did, however, use more replies to the elicitations of the language-impaired children in April (2.70%) than in September (0.74%).

A loop is a communicative act that returns the conversation to an earlier point, such as asking for repetition. The frequency of occurrence of loops remained essentially unchanged in September and April for both the whole class (September=0.32%; April=0.43%) and the language-impaired children (September=0.37%; April=1.80%).

An aside is a communicative act in which the speaker

makes a statement to herself or asks a question of herself. The teacher used asides infrequently during her instruction directed to the whole class and the language-impaired children. in September (W.C.=0.13%; L.I.=0.00%) as well as in April (W.C.=0.09%; L.I.=0.00%).

Acknowledge is a communicative act that acknowledges a student's reaction to the teacher's directive. The teacher in this study used acknowledge infrequently with the whole class (September=0.06%; April=0.00%), and not at all with the language-impaired children.

The communicative acts metastatement, clue, informative, comment, and conclusion were analyzed together as information-giving acts. Elicitations, directives, and checks were analyzed together as information-seeking communicative acts. Table 6 summarizes the information-giving and information-seeking acts directed to the whole class and language-impaired students during September and April.

Table 6 Percent and frequency of occurrence of information-giving and information-seeking communicative acts directed to the whole class and language-impaired children in September and April

	September		April	
Communicative act	W.C. (1549 total)	L.I. (271 total)	W.C. (1164 total)	L.I. (111 total)
Information-giving	22.98% (356)	15.13% (41)	38.40% (447)	27.93% (31)
Information-seeking	46.55% (721)	50.92% (138)	32.73% (381)	31.53% (35)

W.C. = Whole class
L.I. = Language-impaired children

For all students, the teacher used more information-seeking (W.C.= 46.55%; L.I.=50.92%) and less information-giving (W.C.= 22.98%; L.I.=15.13%) communicative acts during September. In April, however, the teacher used more information-giving (W.C.=38.40%; L.I.=27.93%) and less information-seeking (W.C.=32.73%; L.I.=31.53%) communicative acts with all students.

CHAPTER V

Discussion

Teacher language has been a frequent topic in the literature (Berlin, Blank, & Rose, 1980; Blue, 1981; Edwards & Furlong, 1978; Edwards & Westgate, 1987; Nelson, 1985; Lazar, Warr-Leeper, Nicholson, & Johnson, 1989; Sinclair & Coulthard, 1975; Wallach & Miller, 1988). Researchers have examined the development of various language abilities in children, including figurative language and comprehension of syntactically complex statements (Ackerman, 1982; Billow, 1975; Creaghead, 1978; Douglas & Peel, 1979; Emerson & Gekoski, 1980; Nippold, Cuyler, & Braunbeck-Price, 1988; Nippold & Fey, 1983; Nippold, Leonard, & Kail, 1984; Nippold & Martin, 1989; Nippold, Schwartz, & Undlin, 1992; Nippold & Sullivan, 1987; Westerbeck, 1983; Winner, Rosenstiel & Gardner, 1976). If a mismatch exists between teacher language and student comprehension, the student's academic success can be affected. It is important, therefore, to examine and understand a teacher's use of language in the classroom so that expectations for language understanding can be determined.

Interpretation of Occurrence of Non-literal Language

Although the frequency of occurrence of sarcasm, ambiguous statements, metaphors, and similes were essentially unchanged from September to April, idiomatic expressions directed to language-impaired students occurred more frequently at the end of the school year, and more closely approximated the frequency of occurrence for the whole class. Little change was noted in the teacher's use of idiomatic expressions directed to the whole class from September to April. The percentage of idiomatic expressions in this study (10.79% in September, 11.82% in April) was commensurate with past research that has reported idioms in an average of 11.5% of teacher language (Lazar et al, 1989).

Research examining the comprehension of idioms (Ackerman, 1982; Breen, 1986; Nippold & Martin, 1989; Westerbeck, 1983), suggests that children's ability to understand idioms increases with increasing age. Third grade children in a study by Westerbeck (1983) were able to correctly interpret idioms with 98% accuracy. Ackerman (1982) found that in context, third-grade children correctly interpreted idioms with 70.8% accuracy.

The teacher in this study used more idiomatic expressions than any other non-literal language form. The idioms she used occurred during instruction where the context was predictable. For the language-impaired students, the teacher used idiomatic expressions more

frequently in April than in September. Breen (1986) found that learning disabled students have more difficulty than normal children comprehending orally presented idioms. It is likely that the language-impaired students have greater difficulty understanding figurative language forms, including idioms. In September, the teacher may have avoided use of idiomatic expressions in her language directed to the language-impaired students because she felt they were unable to manage the non-literal forms. In April, she may have felt that the language-impaired children were more competent in their understanding of figurative language, and so did not refrain from using idiomatic expressions.

Comprehension of ambiguous statements was investigated by Nippold, Cuyler, and Braunbeck-Price (1988). Nine-year old children in their study were able to correctly identify ambiguous meanings with 9% accuracy. The teacher in this study rarely used ambiguous statements during her classroom instruction. Intuitively, she may have known that children of this age have difficulty interpreting ambiguous statements, and therefore did not use them often when addressing the entire class or language-impaired students.

The comprehension of metaphors also increases with age (Billow, 1975; Douglas & Peel, 1979; Nippold, Leonard, & Kail, 1984; Nippold & Sullivan, 1987; Winner, Rosenstiel & Gardner, 1976). Findings of several researchers indicate

that third grade children comprehend metaphors with an accuracy from 30-75%. Nippold and Fey (1983) examined metaphor comprehension of language-impaired children. The children in their study obtained scores below those of normal children for understanding of metaphors. Results of their study indicate that language-impaired students have more difficulty understanding figurative language forms.

The teacher in this study seldom used metaphors in her classroom instruction. She may have realized that children have difficulty understanding metaphors, and so did not use them in her classroom instruction.

Overall, the infrequent use of figurative language forms may also be attributed to the format and academic content of the lessons being presented. The opportunity for use of non-literal language may not have arisen throughout the language arts lessons examined.

Interpretation of Occurrence of Simple, Compound, and Complex Sentences

In this study, occurrence of simple sentences decreased over the course of the year while the occurrence of complex sentences increased and the frequency of occurrence of compound sentences remained essentially unchanged. Comprehension skills of children steadily improve throughout childhood and adolescence (Emerson & Gekoski, 1980; Nippold, Schwartz, & Undlin, 1992). Emerson and Gekoski

(1980) found that, on the average, third grade students comprehended 79% of the complex sentences presented to them orally. Creaghead (1978) found that third grade children, both good and poor readers, have difficulty interpreting statements that contain relative or adverbial clauses. The teacher in this study used complex sentence forms in her instruction to both the whole class and the language-impaired children. She used more complex language forms in April than in September.

A factor that may have contributed to the complexity of the language used in the data collected at the end of the school year, was the nature of the lessons presented. The videotaped lessons in September were spelling lessons through which the routines of the classroom were being introduced and reinforced. This format lended itself to the use of more simple sentences. The lessons videotaped in April, however, centered on a discussion of whales and an integration of the science and language arts curriculum. This discussion format provided the opportunity for greater expansion of the topic, which may have led to more complex statements.

Another factor that may have contributed to the use of more complex sentences in April, is that the teacher may have been preparing the children for the increased language comprehension demands of fourth grade. The teacher may have felt the children need to be able to understand more complex

language forms in the fourth grade, and was preparing them for this.

It seems reasonable that students must be able to comprehend more sophisticated language forms at the end of the school year than at the beginning. If children with language impairments have difficulty understanding complex sentences, they may be at risk for increased difficulty in the classroom as the school year progresses.

Interpretation of Occurrence of Communicative Acts

There were differences in several communicative acts used by the teacher in September and April. The increase in the use of markers in April may be due to the structure of the lessons. In September, the spelling lessons were very structured, moving from one word to the next, providing the opportunity to mark boundaries between thoughts or topics. In April, however, the lessons were more unstructured, allowing for more expansion and discussion of a topic rather than a consistent move from one topic to the next.

There were differences in the amount of information-giving and information-seeking communicative acts in September and April for the whole class and the language-impaired students. At the end of the school year, the teacher used more information-giving acts (informatives, comments, clues, metastatements, and conclusions) and less information-seeking acts (elicitations, directives, checks)

directed to the entire class as well as to the students identified as having language impairments. These differences may be due to differences in response and task requirements for the language arts lessons analyzed from September and April. The lessons videotaped in September were spelling lessons, where the teacher asked many questions about the words, the meanings, and the spellings. The lessons taped in April were more information-sharing with discussion and expansion of a topic. In April, the children may have been considered more equal partners of classroom discussion.

The results of this study indicated that the teacher gave more new information to the children in April than she did in September. This may be due in part to her attempt to prepare the students for fourth grade. Perhaps in fourth grade, the children are required to listen to more lectures and discussions rather than give answers to elicitations.

Although the difference in percent of occurrence of cues was unchanged, an interesting phenomenon was observed. In September, the children were permitted to "call out" their answers, or the teacher called on the students without requiring them to raise their hands. However, in April, the teacher did not allow calling out, and only nominated those students who raised their hands. She used cues as reminders to the students. This may be due, again to preparing the students for fourth grade. The teacher may have felt that

the students needed to learn the appropriate way to respond to teacher questions, that is by raising their hands.

Nominations decreased from September to April. This may be related to the overall decrease in the frequency of questions used by the teacher in April. Because she asked less questions, she nominated less students to respond. Similarly, the decrease in the frequency of occurrence of accepting a student's response in April may be explained by the overall decrease in frequency of questions. The students had less opportunity to reply to questions, therefore, it seems reasonable that the frequency of acceptance by the teacher would decrease.

Although the percentage of occurrence of teacher replies did not show any change, the actual number of replies increased from September (12) to April (46). This increase in replies reflects that there was also an increase in the number of students asking the teacher questions in April. This increase was consistent for both the whole class and the language-impaired children. The change may indicate that the students felt more comfortable asking questions of the teacher at the end of the year than at the beginning. The change might also be due to the format of the lessons. In April, the lessons were discussion-oriented, with more participation by the students.

More clues were provided to the whole class and the language-impaired children in September than in April. This

difference may indicate that at the beginning of the year, the students needed more direction and help to respond to questions. The teacher may have been more aware of the clues that were effective in encouraging the correct response at the end of the year, and thus needed to use them less frequently.

For the language-impaired children, the teacher used more indirect-elicitations in April than in September. This is different from the trend for the whole class. The indirect-elicitations may give the language-impaired children more of an opportunity to expand on a comment rather than provide an answer to a direct question. The teacher may have been encouraging the language-impaired students to use more expressive language in responding.

The teacher directed a higher percentage of direct-elicitations to the language-impaired children than to the whole class in September. The language-impaired children may not have been volunteering to answer, so the teacher possibly called on them to respond more. The questions were specific and direct, possibly the teacher's strategy to facilitate the correct answer.

The increase of indirect-directives to the language-impaired children in April was also different from the trend for the whole class. These indirect-directives were used by the teacher as a behavior management strategy to get a student to pay attention without interrupting classroom

instruction.

A final consideration is the increase in evaluations directed to the language-impaired children in April. The teacher gave the language-impaired children more feedback regarding their answers to questions during class. She told them whether their answers were correct or incorrect more frequently in April than in September. This change may be due to the modeling of feedback provided by the SLP and graduate student clinician during the language activities in the classroom throughout the year. The teacher may realize the importance of providing feedback for the students.

Implications of this Study

This study contributes to research in the area of teacher language in the classroom by describing the changes in a third grade teacher's language over the course of a school year. Some of the language comprehension requirements children may have as they progress in school include aspects of language content, form, and use. In understanding language content, children must be able to understand idiomatic expressions, which occurred in approximately 11.5% of the utterances in this study, and have been reported in other research (Lazar et al, 1989). The children must be aware that language is sometimes used in a non-literal manner. They need to recognize those situations and learn to use context clues to determine the meaning.

A teacher's language form becomes more complex over a school year. The frequency of occurrence of complex language forms increased from September to April in this study. The students must be able to understand embedded clauses, relative pronouns, and adverbials among other complex forms. Language-impaired children may have difficulty understanding class discussions if they are unable to manage complex statements.

At the end of the school year, the teacher used information-giving communicative acts more frequently. These acts require the students to be able to listen and retain information. For students with language impairments, this may be a difficult task.

The information gained from this study can be used to help determine speech and language goals for identified students, which have classroom, social, and academic relevance. The information also could be used by teachers to gain deeper insight into areas of their language that might be difficult not only for the identified students, but also for other students in the classroom. Results from this study also indicate that to determine the language demands placed on students, observation and analysis of language in the classroom must be varied. Language samples need to be collected at various times of the year, as well as from different lesson formats or subjects.

Authors have suggested that teacher language is high in

the percentage of questions asked to the students (Lindfors, 1990; Sinclair & Coulthard, 1975). Results of the present study suggest too, that a teacher's language should be analyzed at more than one point in time. The decrease in the number of questions asked by the teacher at the end of the year illustrates that changes in question usage may occur over the course of a school year.

The findings of this study suggest the need for further collaboration between teachers and SLPs to determine ways to modify classroom language to encourage success, both academic and communicative, of all children in the classroom. If teachers become aware of some of the complexities of their language, they may be able to develop strategies for the language-impaired students to facilitate their comprehension.

Limitations of the Study

This study involved only one teacher at one grade level. Generalization to other teachers is difficult. The findings also can not be generalized to other grade levels, although one may be able to assume that the trend through the school year is one of developing more complex language.

Although the teacher was unaware of the specific study, she knew that the graduate student clinician videotaped her classroom instruction. This may have influenced her choice to direct questions to the students in her class who are

identified as having speech and language impairments.

The language arts lessons videotaped in September and April were different in topic and format. Although both language samples collected were language arts lessons, spelling lessons were the focus in September and discussion of whales was the focus in April. Perhaps different results would have been obtained if the language samples collected in September and April were both of spelling lessons.

Finally, the amount of data collected was limited. Lessons were videotaped three times for one-half hour each time in September and April. Longer or a greater number of samples may have been more effective.

Suggestions for Future Research

Further research on the language of teachers is warranted. Future studies might examine different grade levels, and possibly compare the language of teachers at different grade levels. For example, comparing the language of a third grade teacher at the end of a school year with the language of a fourth grade teacher at the beginning of a school year might be considered. Studies involving a teacher during the instruction of different subjects may also provide interesting results.

Similar research that includes perspectives of the teacher and language-impaired students would be valuable in determining classroom language that best facilitates

learning. Determining the situations that are difficult for language-impaired children and working with the teacher to modify those situations would help the children succeed in the classroom.

The three areas of language examined in this study, content, form, and use, need to be explored more comprehensively. This study touched on all three areas in the teacher's language. Studies need to be done that focus on one particular area, and examine that area more in-depth.

More information is needed on language-impaired children and the difficulties they face in the classroom. Researchers have probed comprehension of figurative language forms by normal children, but few studies exist that examine comprehension of figurative language by language-impaired children. Comprehension of syntactically complex sentences by language-impaired children needs to be examined, as well as the effects of different communicative acts on the children's comprehension.

More research that focuses on the interaction between the teacher and the students needs to be initiated. The language that is facilitating for the students should be determined. Qualitative research in the classroom needs to explore teacher questions which enhance student learning and participation and those which do not. Research has found that teachers use a large number of questions in their teaching, but it has yet to be determined the role these

questions play.

Research on teaching and the language of teachers needs to continue to help schooling become a successful experience for all children.

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